CANVAS ENERGY®

DRILLING OKLAHOMA'S FIRST HORSESHOE WELL

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WHAT IS A HORSESHOE WELL?

History

- First horseshoe well: 2019 – Shell – Delaware Basin
- 2019-2022: 14 wells
- 2023 & 2024: 27 and 57 wells
- 2025 YTD: 4 spuds
- Basins: Permian, Bakken, Marcellus, DJ, Eagle Ford, Utica, Haynesville, Midland, and now Anadarko

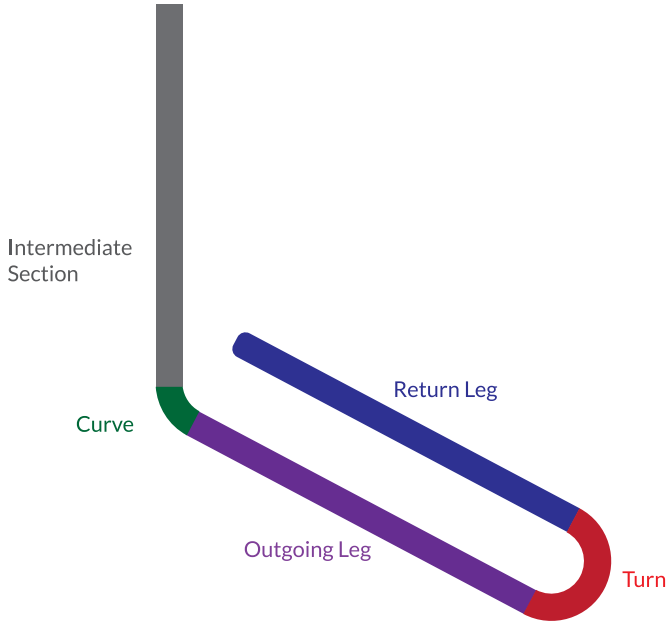
*https://udriller.com/

Benefits

- More efficiently develop a single section or around known drilling hazards
- Fewer surface locations, facilities, artificial lift
- Eliminate one vertical nudge section which is inherently higher risk
- Opens future applicability

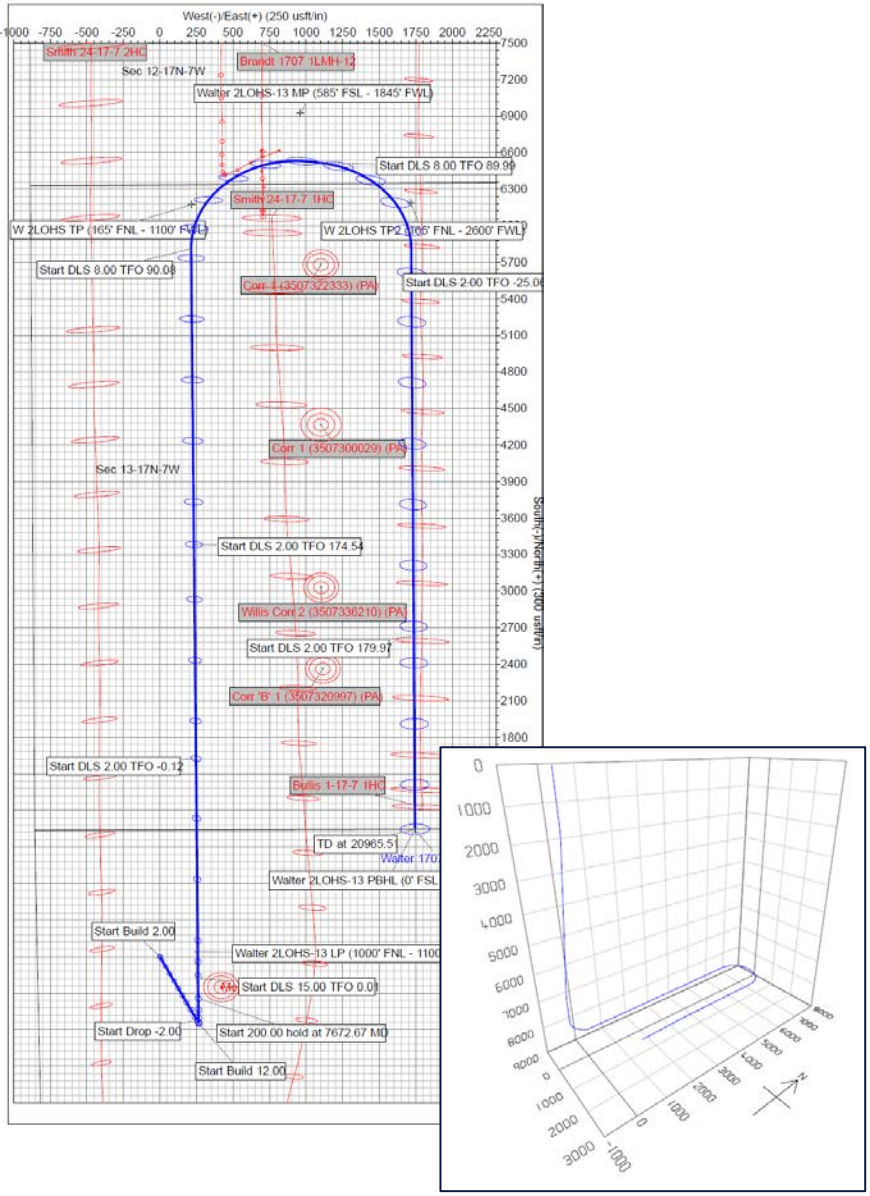
Challenges

- Torque & Drag and Hydraulics must be properly modeled
- Rig and Drill pipe limitations
- The turn may not be completed and could experience wellbore instability depending on formation
- Running liner or production casing can be the critical operation
- Frac and Plug Drillout



HORSESHOE WELL EXECUTION

Walter 1707 2LOHS-24-13 – Spud September 5, 2024



Contingency plans

- Flip the fluid system to OBM
- Pick up Rotary Steerable System
- Rotatable hanger and liner

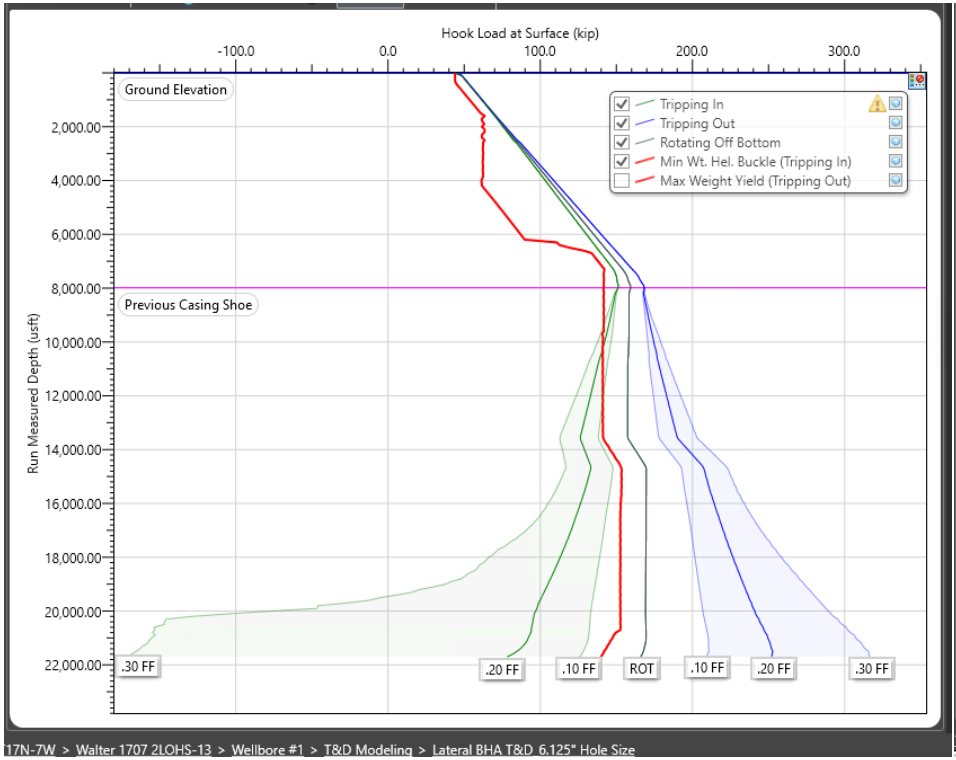
Walter #2

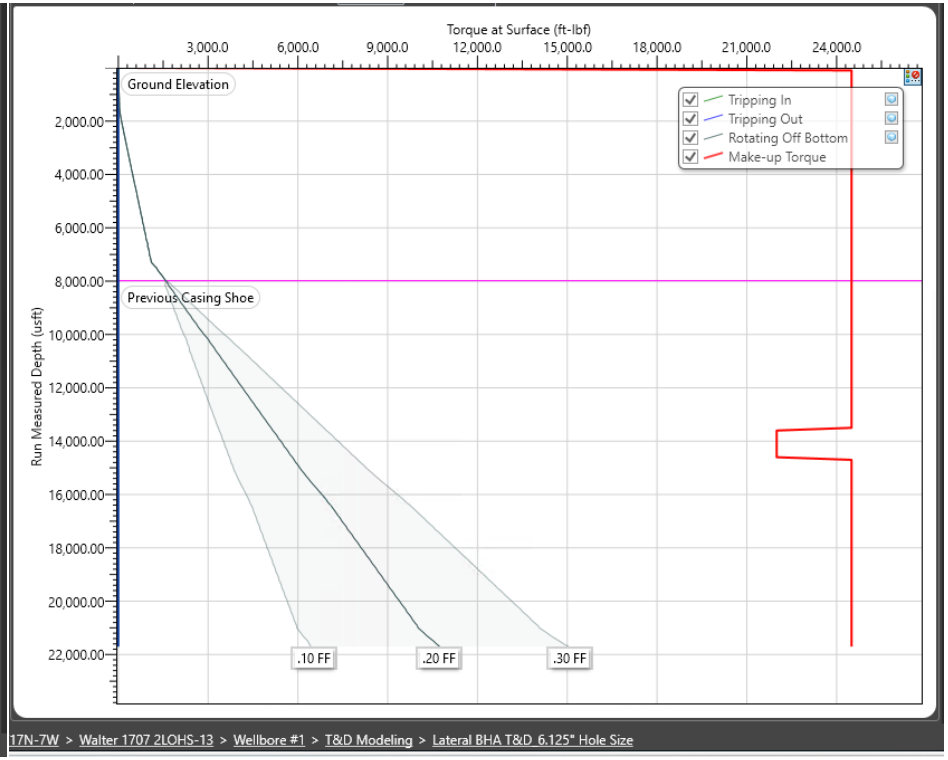
- Single well pad, Osage hz in Kingfisher County drilled in 16 days
  - Out leg: 5,347’
  - Return leg: 4,781’
  - Turn: 2,371’; planned at 8°/100’ dls
  - **Total lateral: 12,499’; 10,929’ completed**
- 7” casing set through the curve
- Drilling fluid: fresh water with lube sweeps
- Lateral was drilled conventionally with 2 BHAs.
  - 1.83 deg motor with MWD
  - 2 agitators @ 3,500’ and 6,000’ behind the bit
  - 1,800’ of HWDP push pipe
- Liner casing:
  - Floated in with hanger set at 55 degs
  - Picked up thirty 4-7/8” drill collars

Challenges Experienced

- INC control in the turn
- Drilling torque in the return leg
- Slides at the end of the well

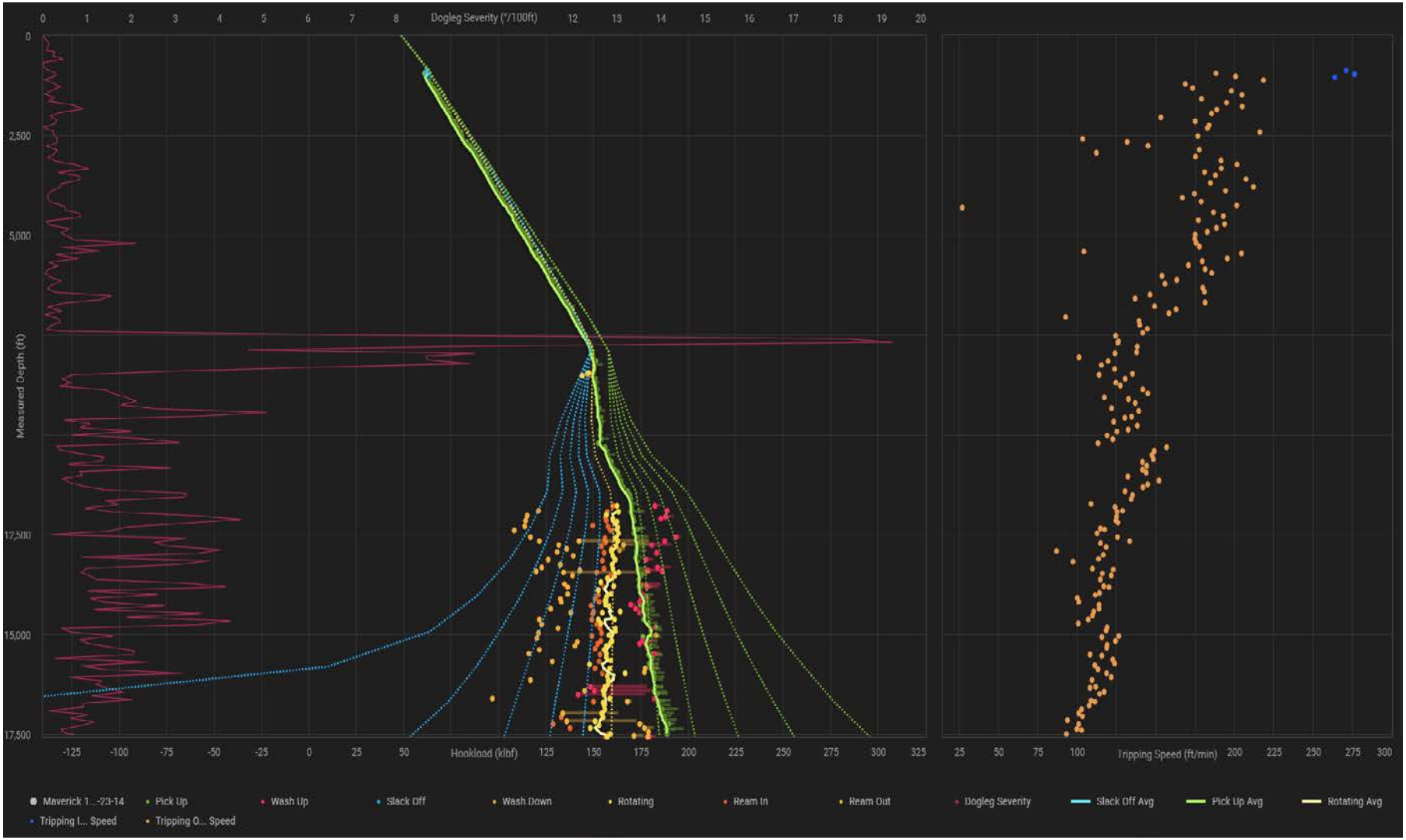
TORQUE AND DRAG MODEL





Max tensile load for 4” 14# S-135 VX-39 drill pipe is 403K#, so 85% safety margin is 343K# max PU

OFFSET WELL T&D ACTUAL HOOKLOAD PLOT

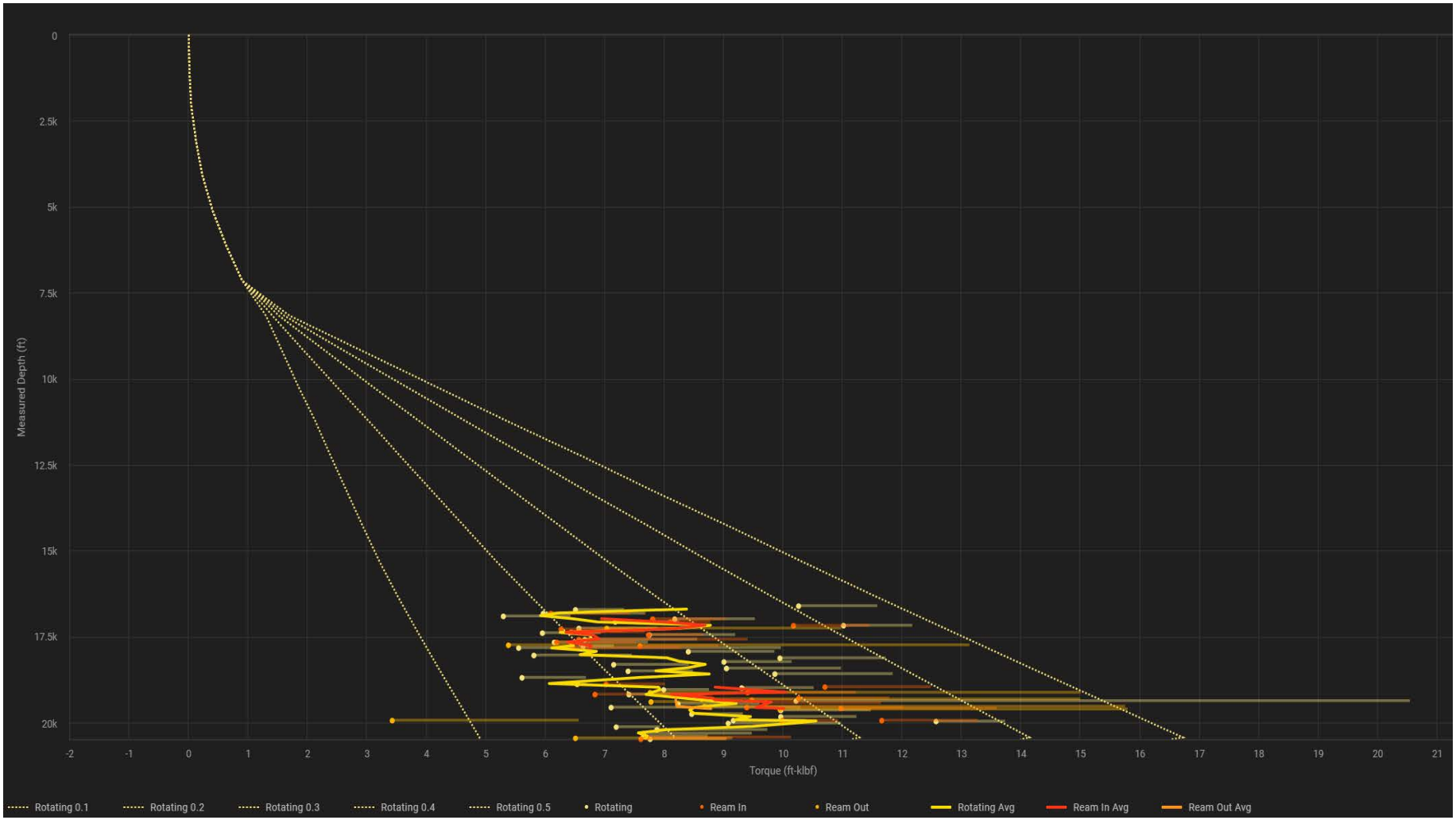


WALTER T&D ACTUAL HOOKLOAD PLOTS

Final BHA – 6-1/8” bit, MM, Directional BHA, 2 agitators, 1800’ HWDP

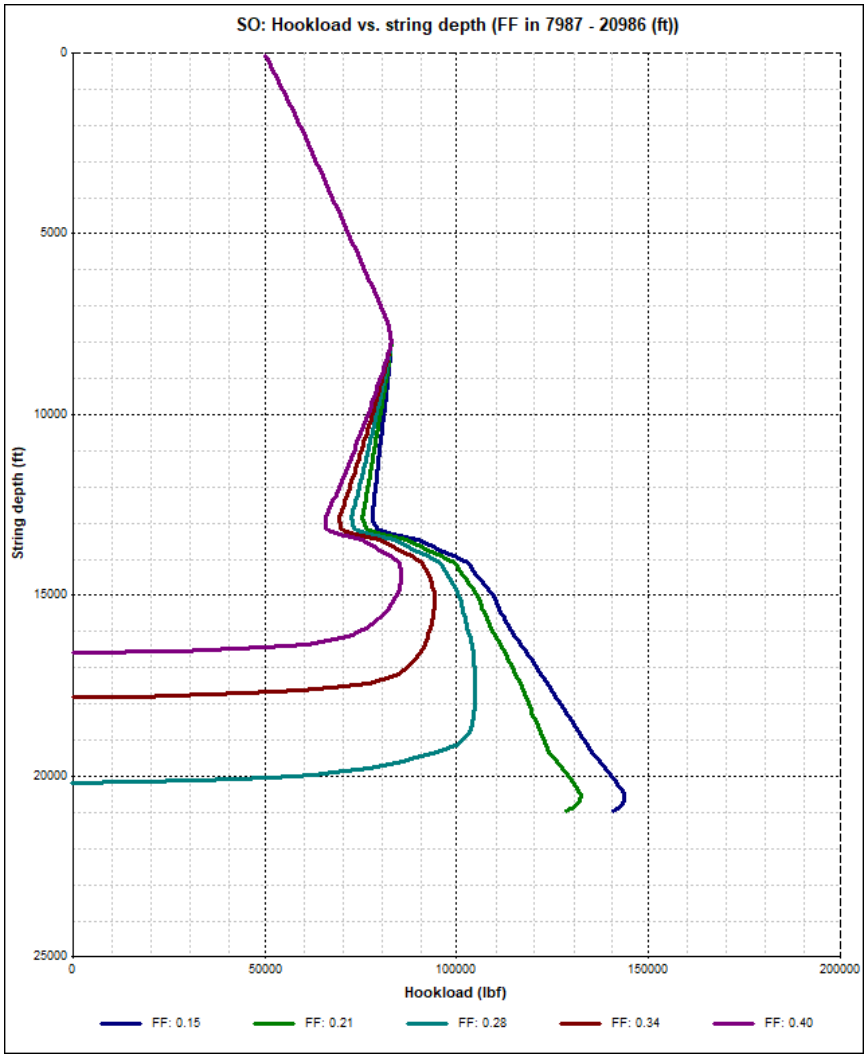
WALTER T&D ACTUAL OFF BTM TORQUE PLOT

Final BHA – MM, Directional BHA, 2 agitators, 1800’ HWDP

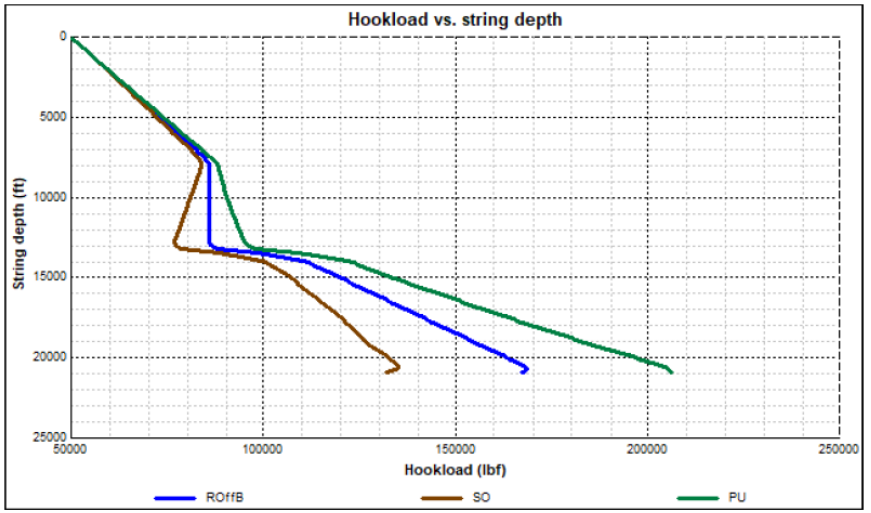


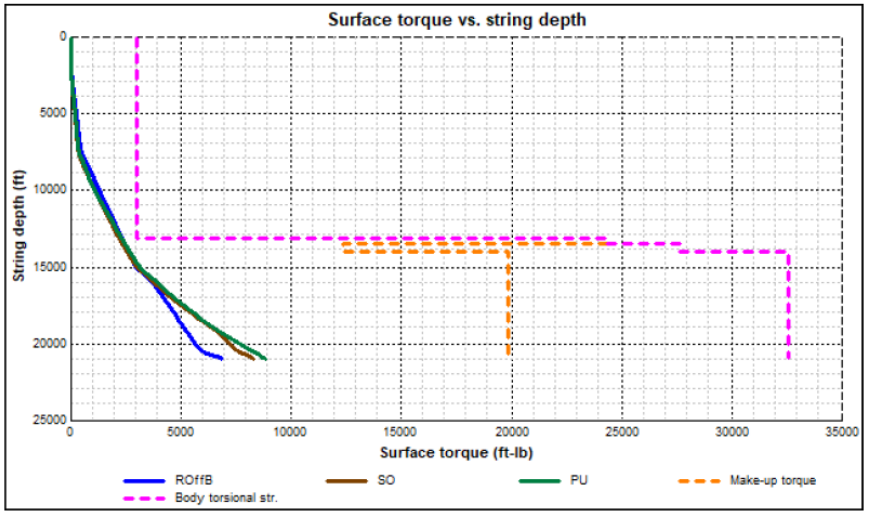
LINER RUN MODEL

Floated, No rotation

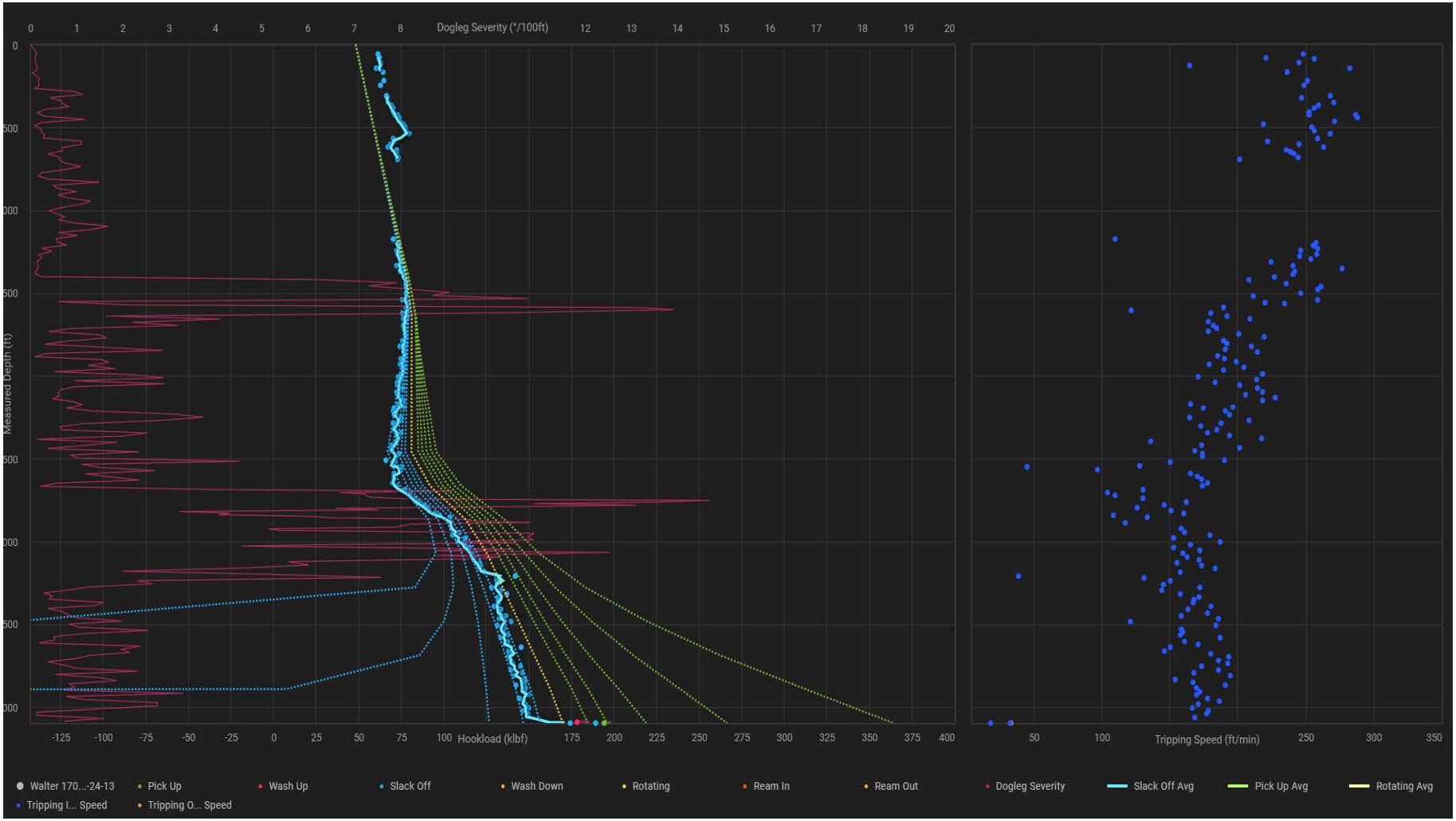


With rotation





WALTER LINER RUN



ECONOMICS

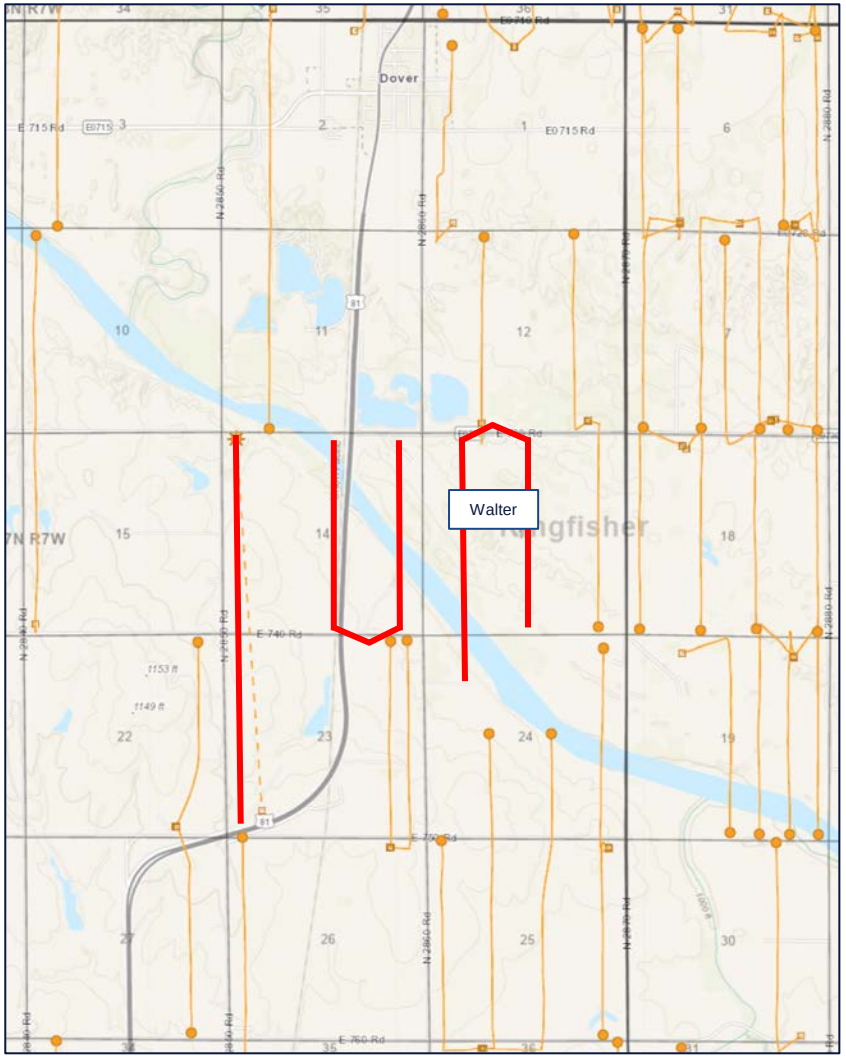
Why Longer Laterals

– Canvas sees a reduction in cost per lateral ft of ~34% by drilling 10K foot vs 5K foot laterals in core assets

Walter #2 Cost Analyses

– Well cost: 3% reduction in total cost vs two 1-mile wells
– Cost/Completed lateral ft: 13% reduction versus the offset 2 well pad

Walter #2HS	Vs 2-mile offset	Vs two 1-mile offsets
Total Well Cost	9.7%	-2.8%
$/Lateral Feet	-5.1%	-13.3%



ACKNOWLEDGMENTS

RECAP AND DISCUSSION

Horseshoe wells allow for improved drilling and completions costs in sections stranded by lease lines or geologic hazards by taking advantage of the superior economics of longer laterals

With proper modeling, a horseshoe is not much more complex than a typical extended lateral

Hydraulics are not affected much other than the added lateral length

Reaching TD with coil tubing could be challenging and may require dissolvable plugs

Walter #2HS	Vs 2 mile offset	Vs two 1-mile offsets
Total Well Cost	9.7%	-2.8%
$/Lateral Feet	-5.1%	-13.3%